

« Letter to the Editors, continued

results of research. Some of these were successful and some failed but produced interesting results nonetheless.

The meaning and the purpose of making what we know ready for service or action continues to be developed but a few things have become clear. We cannot simply push what we know out. We simply cannot pull people in, hoping that the data will stick. What is emerging, is that we need to link to one another and engage in ongoing exchanges – to determine utility, purpose, and value of what we know - to grow and support each other's development. Knowledge mobilization, to be successful, is about mutual benefits, community, and partnerships.

Working with the Special Education leadership of CODE on knowledge mobilization this past year has been both a pleasure and privilege. Of all the projects I have worked on over the past 6 years, I believe that CODE and those involved with projects funded by CODE truly understand that knowledge mobilization is led from the middle and for the purpose. I always try to focus my work on purposeful projects that consider not only content, which is important, but perhaps not as important as considerations of context, capacity, and a culture that supports the use, sharing, and co-creation of knowledge(s), in its many forms. I believe that we put the emphasis where it truly belongs this year.

From the conversations on the telephone and around boardroom tables; to the Regional Workshops where we swam in fishbowls to determine issues, priorities, and next steps; to the Webinars - expertly facilitated by Curriculum Services Canada – on complexity, systems thinking, reculturing, and communities of practice; to the incredible exchanges of ideas and practice at the Education for All Leadership Summit; to the excellent articles found in this issue of CODE Chronicles, you have all succeeded in making what you know more ready, more useful, more accessible, and more valuable than it would otherwise be – sitting on a shelf, parked in your heads, or resting in a report. To paraphrase a quote about special education – the mobilization of your knowledge may be necessary for some but it is good for all. Congratulations on the success of your projects and may the effects be felt for many years to come.

A most sincere Thank You.

Peter Levesque
Director, Knowledge Mobilization Works

CODE Project (Kurzweil 3000): Summary Report 2007–2008

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Alignment with Ministry Initiatives

The Lakehead District School Board chose to make text-reader (text-to-speech) software the focus for the 2007–2008 CODE Project. In response to the objectives of the Literacy and Numeracy Secretariat, the primary objective for the project was to examine the impact of on student achievement of using Kurzweil 3000 text-reader software, to see if such assistive technology could help close the achievement gap for students with learning disabilities, thus improving our EQAO and OSSLT

scores as well. The CODE team worked with students identified as Communication: Learning Disability (LD) in Grades 6–8 at selected elementary schools within the Lakehead District School Board. These specific students were using equipment purchased through the SEA claim Ministry Initiative. The study ran from September 2007 to the end of March 2008.

School and System Organization

A team of three people were chosen from the board, administration and school level to carry out the project. The first mandate for the CODE team was to locate the exceptional pupils within the LDSB (Grades 6–8) who had the software available to them. Eventually

we narrowed our study down to seven schools and 18 students. The schools/students were divided into three groups, and each had one CODE team member assigned to them.

The Project Timeline

Phase 1: Professional Learning and Instructional Leadership

1. Ensure SEA equipment is up and running for the students.
2. Choose three staff members who are pursuing leadership opportunities. Train this CODE team on Kurzweil and The Flynt-Cooter Reading Inventory.
3. Create surveys for the collection of data, along with the Kurzweil Skills Checklist, Teacher Survey and Student Impact Survey to be administered at the end of the study.

Phase 2: Professional Development and Assessment (October 2007 until the end of March 2008)

1. Train both teachers and students on Kurzweil 3000.
2. Pre-assessment data collection: Administer the Flynt-Cooter to obtain a reading comprehension level—without the use of Kurzweil, and then with Kurzweil.
3. Administer the Kurzweil Skills Checklist to determine the level of confidence/usage of Kurzweil.
4. Team will follow up the initial training with frequent visits to support the use of Kurzweil.
5. Collect all pre-assessment data and submit to team.

Phase 3: Results and Communication

1. Post-assessment data collection: Administer the Flynt-Cooter, both with and without the use of Kurzweil.
2. Administer the follow-up Kurzweil Skills Checklist.
3. Distribute the Teacher Survey and Student Impact Survey.
4. Collect all post-assessment data and submit.
5. Communicate results with school and system.

Kurzweil Assessment Checklist

The following checklist was administered to student participants pre- and post-project in order to assess their overall competency using Kurzweil 3000.

| Kurzweil Assessment Checklist | | | |
|---|-----------------|----------------|------------------|
| Student's name: _____ | | | |
| Grade: _____ | | | |
| School: _____ | | | |
| Student is able to: | Not evident (0) | Developing (1) | Satisfactory (2) |
| Open the program | | | |
| Open a file | | | |
| Reading: The student is able to: | | | |
| Properly modify Speech- to-Text features i.e. speech, voice, pace | | | |
| Access internet browser to read internet articles | | | |
| Study Tools: The student is able to: | | | |
| Highlight text | | | |
| Extract text | | | |
| Word prediction | | | |
| Spell check | | | |
| Definitions/Synonyms | | | |
| Notes | | | |
| Fill-in-the-blanks | | | |
| Virtual Printer | | | |
| Customized Tool Bars | | | |
| Scanning: The student is able to: | | | |
| Scan Text | | | |
| Save as File | | | |
| Problem Solving | | | |
| Knows procedure when equipment is malfunctioning (i.e. won't scan, scanner locked, computer won't turn on etc.) | | | |
| Total | | | |

Kurzweil Teacher Survey

This survey allowed each teacher to report their personal impressions on the implementation of the program.

| Kurzweil Teacher Survey | | |
|---|-----|----|
| Teacher: _____ | | |
| School: _____ | | |
| Statement | Yes | No |
| 1. I liked using the Kurzweil text reader with my LD students. | | |
| 2. It was easy to implement with my students. | | |
| 3. Kurzweil was easy to learn. | | |
| 4. It helped my students read. | | |
| 5. It helped my students stay on task. | | |
| 6. It helped my students work independently. | | |
| 7. It helped my students get better grades on tests. | | |
| 8. It helped students feel better about themselves. | | |
| 9. It improved students' interest in what they were learning. | | |
| 10. It helped students understand what is written in their books. | | |
| 11. It helped students complete their work. | | |
| 12. Kurzweil has helped me program for my student. | | |
| Please report on two strategies that you have incorporated using Kurzweil to support your students. | | |
| In what ways has the student's academic achievement improved since using Kurzweil? | | |

(Adapted from Summary Report of the Iowa Text Reader Studies 2006–2007)

« CODE Project (Kurzweil 3000), continued

Kurzweil Student Impact Survey

This survey gave students a chance to voice their personal impressions about the program and was given to participating students at the end of the CODE project.

| Kurzweil Student Impact Survey | | |
|---|-----|----|
| Teacher: _____ | | |
| Student: _____ | | |
| School: _____ | | |
| Statement | Yes | No |
| 1. I liked the software. | | |
| 2. I thought it was easy or very easy to learn. | | |
| 3. It helped me with my schoolwork. | | |
| 4. I think it helped me with my reading. | | |
| 5. It helped me stay on task. | | |
| 6. It helped me work better independently. | | |
| 7. It helped me earn better grades on tests. | | |
| 8. It helped me feel better about myself. | | |
| 9. It helped interest me in what I was learning. | | |
| 10. It helped me understand what was written in my books. | | |
| 11. It helped me get my work done. | | |

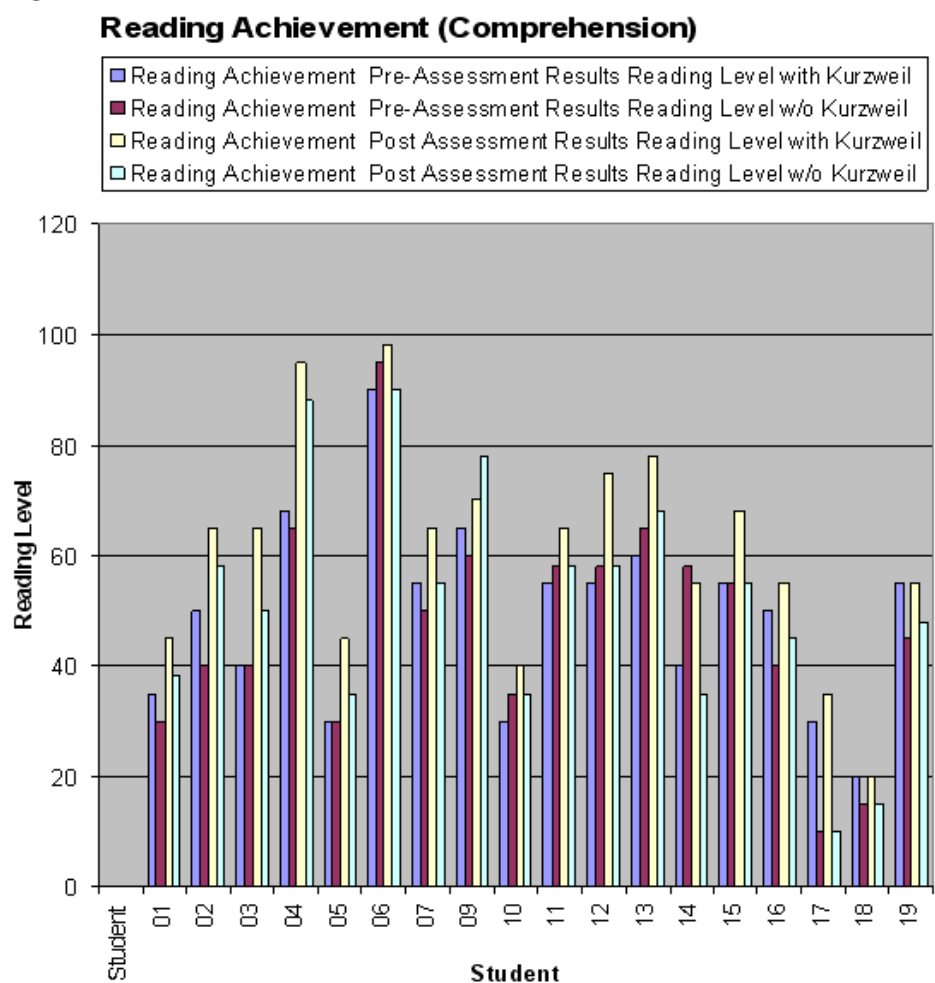
(Adapted from Summary Report of the Iowa Text Reader Studies 2006–2007)

Summary of Results for CODE Project 2007–2008

The achievement results for passage comprehension of students participating in this study are graphically displayed in Figure 1.

Data collected indicates a clear trend in both pre- and post-assessment results. Students are consistently able to achieve higher passage comprehension scores with Kurzweil when the passage is read back to them.

Figure 1



Kurzweil Student Impact Survey Results

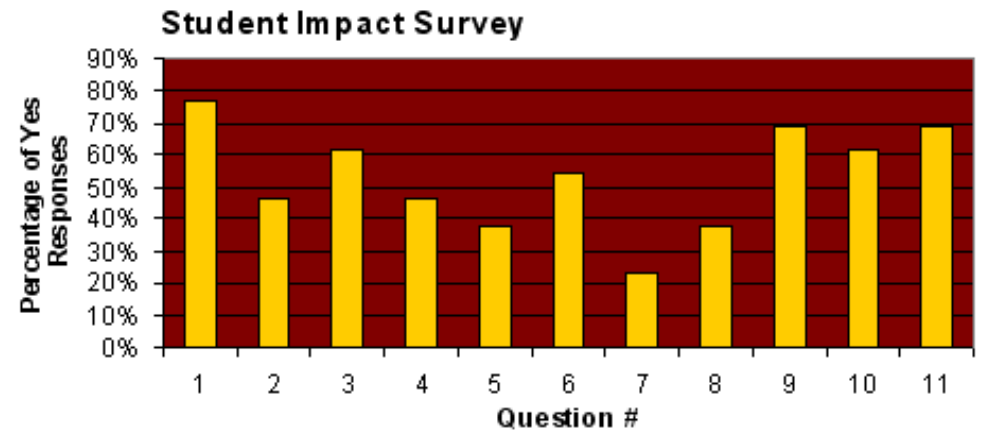
The results of this survey are reported in Table 2 and are graphically represented in Figure 2. Results indicate that the students found using Kurzweil 3000 to be a positive experience and created independence.

Only 23% saw the software as beneficial towards helping them get better grades.

Table 2

| # | Kurzweil Student Impact Survey Question | % of Students Responding "Yes" |
|-----|---|--------------------------------|
| 1. | I liked the software. | 77% |
| 2. | I thought it was easy or very easy to learn. | 46% |
| 3. | It helped me with my schoolwork. | 62% |
| 4. | I think it helped me with my reading. | 46% |
| 5. | It helped me stay on task. | 38% |
| 6. | It helped me work independently. | 54% |
| 7. | It helped me earn better grades on tests. | 23% |
| 8. | It helped me feel better about myself. | 38% |
| 9. | It helped interest me in what I was learning. | 69% |
| 10. | It helped me understand what was written in my books. | 62% |
| 11. | It helped me get my work done. | 69% |

Figure 2



Kurzweil Teacher Survey Results

The results are recorded in Table 3 and are graphically represented in Figure 3. The teachers' survey results are predominantly favourable; i.e., 100% of the teachers responded positively to 7 of the 12 questions.

| # | Kurzweil Teacher Survey Question | Percentage of Teachers Responding "Yes" |
|-----|---|---|
| 1. | I liked using the Kurzweil text reader with my LD students. | 100% |
| 2. | It was easy to implement with my student. | 83% |
| 3. | Kurzweil was easy to learn. | 100% |
| 4. | It helped my students read. | 100% |
| 5. | It helped my students stay on task. | 100% |
| 6. | It helped my students work independently. | 100% |
| 7. | It helped my students get better grades on tests. | 50% |
| 8. | It helped students feel better about themselves. | 83% |
| 9. | It improved students' interest in what they were learning. | 100% |
| 10. | It helped students understand what is written in their books. | 100% |
| 11. | It helped students complete their work. | 83% |

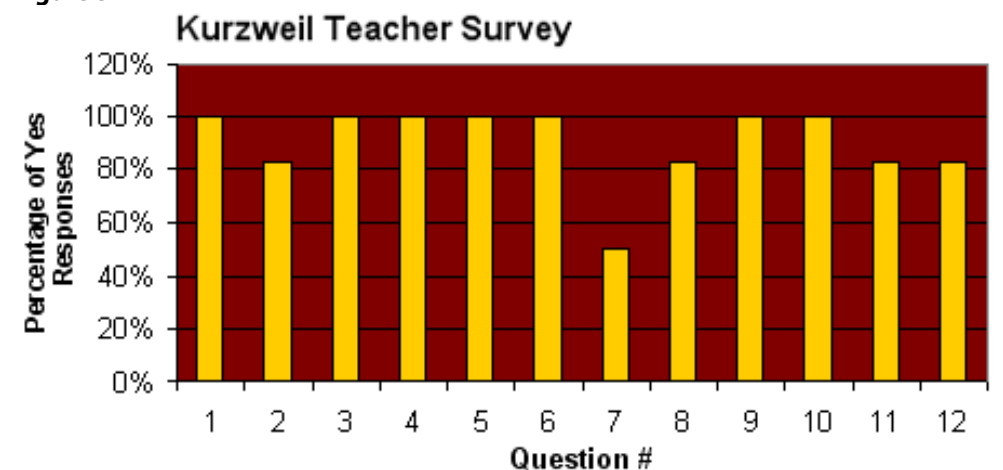
Strategies identified for incorporating Kurzweil to support student learning

- comprehension strategies (re-read, extract key points, highlight key facts)
- complete a test
- practice EQAO activities
- labs, text, respond to class work
- daily assignments being scanned which led to independence
- tests—students were able to edit and use the voice
- student has used Kurzweil to read and prepare reading responses
- used to read content from text books and prepare answers
- used for writing (narrative, biography research)

Ways in which academic achievement improved since using Kurzweil

- students were more focused with activities. They felt more independent and took initiatives
- the biggest was the boost to their confidence and ability to complete the work and better understand the task
- higher grades, assignments complete, more confidence
- the student has shown improved self-esteem
- the student has been able to "read" grade level material and comprehend
- the student has stayed on task longer
- complete work at a higher level than previous work

Figure 3



Conclusion

Using reading levels obtained with and without Kurzweil, the results from this CODE project demonstrate that improved training and consistent use of Kurzweil 3000 has improved achievement in reading comprehension. The results of the Kurzweil Assessment Checklist, the Student Impact Survey and the Teacher Survey indicate that overall, this initiative has enabled this group of trained teachers and students to understand the importance of assistive technology.

« CODE Project (Kurzweil 3000), continued

Lakehead District School Board is dedicated to implementing strategies and materials to maintain the use of assistive technology as the result of our study.

Sustainability and Lessons Learned

- 1. Selection of Teachers:** Teachers need to fully understand that the purpose of utilizing assistive technology is to help them to offer a differentiated learning strategy to students with a learning disability. **Knowledge Mobilization:** Teachers require more training on using technology to differentiate instruction. The Special Education Resource Teacher is now available to train and support teachers and students with this program.
- 2. Involvement with School Administration:** We recommend that school administrators be exposed to Kurzweil 3000 in order to further enhance their understanding of the significance of this assistive technology. **Knowledge Mobilization:** All administrators were given a presentation on the program and how it can support student learning. Information Systems Technicians (ISTs) were also trained on the use of Kurzweil and troubleshooting strategies.
- 3. Duration of the Program:** Teachers and students needed more time to become proficient with the program; also, it would be best to run a project of this complexity over a number of school years. **Knowledge Mobilization:** Resource teachers will support these students and teachers to enhance their use of Kurzweil.
- 4. Hardware/Software:** Several issues surrounding hardware and software arose at the start of the project. Having a place to set up the equipment and make it accessible in the classroom wasn't possible due to a number of situations (space, power availability, etc.). **Knowledge Mobilization:** ISTs are now tracking all equipment and Resource Teachers are ensuring equipment is set up properly. All schools are receiving networked Kurzweil Programs and high-speed scanners, with training support in place. All students who require scanned text will be registered with the Ross McDonald Library in order to access already-scanned text.
- 5. Time Commitment:** Also of concern was the amount of time required to scan and get set up for a lesson. Time constraints were more of an issue for students involved in a rotary system. **Knowledge Mobilization:** Where possible, it was suggested that Educational Assistants or students scan material before classes start in the morning. The materials from the Ross McDonald Library will alleviate much of this issue.
- 6. Initial Training:** In some cases it was found that instructions for using Kurzweil 3000 had to be repeated several times. **Knowledge Mobilization:** After introductory training, it is essential that both teacher and student complete the practice activities promptly to ensure a satisfactory level of competence. To sustain a level of commitment, the Special Education Resource Teacher is available to support further training. ●



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Moving Ahead with Special Ed

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Background

Over the past three years, CODE has provided SCDSB with funds to support both teachers and students in an ongoing focus on improved learning. These funds were based upon proposals presented each year by the Sudbury Catholic District School Board Special Education staff.

Wireless Technology

The first year saw the completion of outfitting each elementary school with a bank of wireless laptops. These computers held the assistive technology software Co-Writer and Write

Out Loud. The laptop technology also provided options for using a coloured text or background to support students with that specific need. A teacher on special assignment

visited all schools to model the use of these tools for teachers and students. Evidence-based strategies to support students with special education needs, outlined in a new Ministry of Education resource, Education For All, were introduced and became the basis for classroom instruction.



Literacy Coaches

In the second year, a series of implementations were made. Teachers (Literacy Coaches) were provided with release time to participate in school Catholic Professional Learning Communities to focus on student achievement data and to plan, as an accountable group with colleagues, next steps to improve student learning.

Board Experts

Two teachers, one with expertise in literacy numeracy, and the other with expertise in assistive technology, were assigned to guide teachers in implementing research-based teaching and learning strategies to continue the enhancement of student learning. These expert teachers visited classrooms to model lessons and work side-by-side with teachers to ensure that students with special needs received the differentiated instruction they required. The assistive technology teacher worked with students identified as learning disabled. She deepened the students' ability to use Co-Writer and Write Out Loud.

In-Classroom SERT Support

As part of our board's special education support, we began moving to a new model of resource. Resource teachers would begin to provide support for special needs students within the Signposts of Success Along the Way classroom setting. This model would allow students to work with support in the context of the classroom curriculum amongst their peers. Also introduced was the concept of in-school support teams.

In 2007-2008, we continued to use the strategies that over the past two years have proven to be very successful. In addition, we provided bimonthly release of all teachers to participate in Catholic Professional Learning Community sessions; implemented the directives of Education For All; continued training for teachers and students on the use of assistive technology provided through the use of the laptop computers; provided a resource within the classroom setting; held in-school support team meetings; and purchased additional laptop computers, earphones, printers, and scanners.

The system implementation plan had two clear foci:

- enhancing the professional growth of teachers, school administrators, and school support staff; and
- improving learning for all students with a particular concentration on students demonstrating special education needs.

We learned that "The most powerful feature of schools in terms of developing children as successful readers and writers is the quality of classroom instruction" (from Richard Allington, *What Really Matters for Struggling Students*, 2001). As we reflected on the best practices of our CODE 2006-07 project, we discovered that the provision of teacher release time during the school day was truly the best way to enhance teachers' professional learning, which in turn improved teacher efficacy and thus made a difference for students struggling with learning to read and write. The total budget provided through this 2007-08 CODE initiative was dedicated to providing all teachers with bimonthly release for job-embedded professional learning.



Each school principal took on the role of instructional leader in his or her school, developing Catholic Professional Learning Communities (C-PLC) which began the process of improving teaching and learning. Central board staff provided intense support to all schools by. Together, implementing the comprehensive research of Richard Dufour (*Learning by Doing: A Handbook for Professional Learning Communities at Work*, 2006), we began our journey to developing high-quality classroom teaching resulting in success for all

students, recognizing that sustainable school improvement requires a shared language, empowered leadership, and TIME.

Signposts of Success Along the Way

- Principals and vice-principals came together monthly in their own C-PLC groups to carry out a book study using the professional text *Learning Communities at Work* (by Dufour, Dufour, Eaker, and Many). These sessions clarified knowledge of the "what" and "how" of professional learning communities. Facilitation of the book study was shared by the Superintendent of Academic Programs and Education, Literacy and Numeracy SAOs, and board Academic Services staff.
- The Superintendent of Academic Programs and Education arranged through the CODE 2007-08 project to fund a bimonthly half-day release for all elementary school staff and selected secondary school teams.
- Principals used a simple framework to guide the work of the C-PLC team: analyze timely student assessment data, collaboratively develop next steps for classroom intervention, determine evidence of future learning to be the focus of the next C-PLC, and finally, engage in professional development. Principals kept an Evidence Binder of session minutes and evidence of best-practice successes.
- Schools began to enjoy the bimonthly professional learning opportunities provided in the job-embedded format. Schools creatively determined ways to continue the process during the alternate months to ensure sustainability during the next school year.
- An Academic Services (combined curriculum and special education) staff member was assigned to each school and attended the C-PLC sessions as a support and to